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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,542	01/02/2002	Masayuki Endo	740819-726	5588

22204 7590 03/26/2003

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EXAMINER

CHACKO DAVIS, DABORAH

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 03/26/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,542

Applicant(s)

ENDO ET AL.

Examiner

Daborah Chacko-Davis

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S.

Patent No. 6,103,447 (Chen et al).

Chen, in col 3, lines 5-11, and lines 60-64, in col 4, lines 49-50, in col 6, lines 1-13, and lines 44-53, in col 9, lines 26-62, discloses a pattern formation method using a chemically amplified resist that includes a base polymer without a hydroxyl or carboxyl group, a lactone group, an aromatic compound that does not generate acid upon exposure to radiation, an acid generator that generates acid upon exposure to radiation, and irradiating the resist with extreme UV (1-30 nm) radiation, and forming a resist pattern by developing the resist after the exposure process (claims 1, 5, 6, and 9). Chen, in col 4, lines 49-50, discloses that the lactone group is a mevalonic lactone group (claim 2). Chen, in col 9, lines 26-27, discloses that the chemically amplified resist composition has an aromatic group such as hydroxystyrene that does not generate acid during e-UV irradiation (claims 3-4, and 7). Chen, in col 3, lines 51-56, discloses that the base polymer comprises a non-aromatic group such as methacrylates (claim 8).

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3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U. S. Patent No. 6,251,560 (Wallow et al) teaches a chemically amplified resist composition comprising a polymer group with a lactone moiety and a photoacid generator capable of high resolution lithography. U. S. Patent Application Publication No. 2001/0026901 (Maeda et al) teaches a pattern forming method using a chemically amplified composition comprising a methacrylate unit of an alicyclic lactone group and a photoacid generator having excellent transparency in the shorter wavelengths of the UV spectrum.

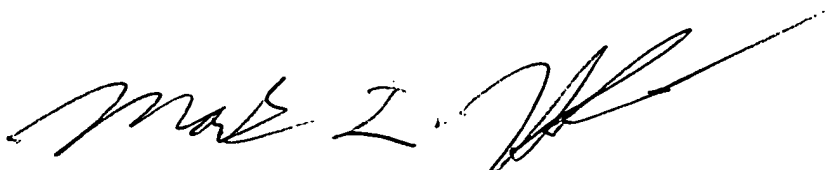
Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daborah Chacko-Davis whose telephone number is (703) 306-5923. If the examiner is unavailable, you may contact her supervisor, Mark F. Huff at (703) 308-2464. FAX communications should be sent to the appropriate FAX number; (703) 872-9311 for After Final Responses only or (703) 872-9310 for all other responses. FAXES received after 4:00 P.M. will not be processed until the following business day.

dcd



March 18, 2003.



MARK F. HUFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700